

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system for producing oil, comprising:

a submersible pump; and

a motive unit to power the submersible pump, the motive unit being a single device with a motor section and motor protector section to seal the motor section from surrounding fluid and to accommodate thermal expansion of an internal lubricating fluid during production of oil, wherein the motive unit comprises a plurality of bearings having self lubricating bushings.
2. (Original) The system as recited in claim 1, wherein the motor section comprises a motor section shaft and the motor protector section comprises a motor protector section shaft, the motor section shaft and the motor protector section shaft being affixed to each other.
3. (Original) The system as recited in claim 2, wherein the motor section shaft and the motor protector section shaft are affixed to each other by a threaded joint.
4. (Original) The system as recited in claim 2, wherein the motor section shaft and the motor protector section shaft are affixed to each other by an interference fit.
5. (Original) The system as recited in claim 2, wherein the motor section shaft and the motor protector section shaft are affixed to each other by a cross bolt.
6. (Original) The system as recited in claim 1, wherein the motive unit comprises an electrical cable connection having a spring biased terminal block movable between a sealed position and an open position.

7. (Original) The system as recited in claim 1, wherein the protector section comprises a protector head having a transverse sand escape hole.
8. (Original) The system as recited in claim 7, wherein the protector section further comprises a bearing and a shroud protecting the bearing from sand.
9. (Original) The system as recited in claim 1, wherein the motive unit comprises at least one journal bearing having a replaceable wear sleeve.
10. (Original) The system as recited in claim 9, wherein the replaceable wear sleeve is coupled to a shaft by a key and a retainer.
11. (Original) The system as recited in claim 9, wherein the replaceable wear sleeve is coupled to a shaft by a tolerance ring.
12. (Canceled)
13. (Original) The system as recited in claim 1, wherein the motor section comprises a rotor bearing having a spring-loaded key.
14. (Original) The system as recited in claim 1, wherein the motor section comprises an integral sensor to sense at least one well related parameter.
15. (Original) The system as recited in claim 1, wherein the motive unit has an axis and a plurality of oil communication holes deployed at an angle with respect to the axis.
16. (Currently amended) A method of forming a motive unit for a submersible pumping system, comprising:

connecting a motor section shaft to a protector section shaft to form an axially affixed connection;

placing a sealed housing about the axially affixed connection to form a combined motor section and protector section; ~~and~~

prefilling the combined motor section and protector section with a lubricating fluid; and

forming a protector section head with lateral sand escape holes disposed above a protector section bearing.

17. (Original) The method as recited in claim 16, further comprising moving the combined motor section and protector section to a desired wellbore location.
18. (Original) The method as recited in claim 16, wherein connecting comprises utilizing a threaded coupler.
19. (Original) The method as recited in claim 16, wherein placing comprises threadably engaging a motor section housing with a protector section housing.
20. (Original) The method as recited in claim 16, further comprising providing the motor section with a terminal block that is spring biased toward a sealed position, the terminal block being movable to an open position upon pluggably receiving a cable connector.
21. (Canceled)
22. (Currently amended) The method as recited in claim 16, further comprising providing the combined motor section and protector section with a ~~the~~ journal bearing having a replaceable wear sleeve.
23. (Original) The method as recited in claim 16, further comprising utilizing a bearing with a self lubricating bushing.

24. (Original) The method as recited in claim 16, further comprising incorporating an integral sensor into the motor section.
25. (Original) The method as recited in claim 16, further comprising forming oil communication holes at an angle with respect to an axis of the combined motor section and protector section.
26. (Currently amended) A method for protecting a submersible motor, comprising:
- constructing a motive unit having a longitudinal axis for a submersible pumping system with a motor section and a protector section combined; ~~and~~
- delivering the motive unit to an oil production well as a single unit; and
- providing the motive unit with a plurality of oil communication holes deployed at an angle with respect to the longitudinal axis such that the angle of the plurality of oil communication holes corresponds with an angle at which the motive unit is positioned relative to vertical during filling of the motive unit with oil.
27. (Original) The method as recited in claim 26, further comprising prefilling the motive unit with a lubricating oil prior to delivering the motive unit to the production well.
28. (Original) The method as recited in claim 26, further comprising axially connecting a motor section shaft with a protector section shaft.
29. (Original) The method as recited in claim 28, wherein axially connecting comprises providing a single, unitary shaft.

30. (Original) The method as recited in claim 28, wherein axially connecting comprises providing a coupling sleeve to create a permanent joint between the motor section shaft and the protector section shaft.
31. (Original) The method as recited in claim 26, further comprising forming a sand escape hole in a head of the protector section.
32. (Original) The method as recited in claim 26, further comprising utilizing journal bearings having replaceable wear sleeves in the motive unit.
33. (Original) The method as recited in claim 26, further comprising utilizing journal bearings having self lubricating bushings in the motive unit.
34. (Original) The method as recited in claim 26, further comprising utilizing rotor bearings having spring loaded keys.
35. (Original) The method as recited in claim 26, further comprising placing a sensor within the motor section.
36. (Canceled)
37. (Original) A system for producing a fluid, comprising:

a motor section having an electrical cable connection, the electrical cable connection having a terminal block movable between a sealed position and an open position that enables fluid communication between a connection interface and an interior volume of the motor section.

38. (Original) The system as recited in claim 37, further comprising a spring to spring bias the terminal block toward the sealed position.

39. (Original) The system as recited in claim 38, further comprising a dielectric gasket to limit electrical tracking.
40. (Original) The system as recited in claim 37, further comprising a protector section permanently coupled to the motor section.
41. (Original) A system for producing a fluid, comprising:
- a motive unit for driving a submersible pump, the motive unit having a journal bearing disposed about a drive shaft, wherein the journal bearing has a replaceable sleeve.
42. (Original) The system as recited in claim 41, wherein the replaceable sleeve is keyed to the drive shaft.
43. (Original) The system as recited in claim 41, wherein the replaceable sleeve is press fit onto the drive shaft with a tolerance ring.
44. (Original) The system as recited in claim 41, wherein the journal bearing comprises a plurality of journal bearings, each journal bearing having a replaceable wear sleeve.
45. (Original) The system as recited in claim 41, wherein the motive unit comprises a motor section and a protector section assembled as a single unit.
46. (Original) A system for use in pumping a fluid from well, comprising:
- an electric submersible pumping system having a motor section and a protector section, wherein at least one of the motor section and the protector section comprises a bubble sump to maintain any released gases in a dedicated volume.

47. (Original) The system as recited in claim 46, wherein the motor section and the protector section are manufactured as a single unit.
48. (Original) The system as recited in claim 46, wherein the bubble sump is disposed in the protector section.
49. (Original) The system as recited in claim 46, wherein the bubble sump comprises a framework having the dedicated volume for collecting the released gases.
50. (Original) The system as recited in claim 46, wherein the framework is disposed above a protector bag.
51. (Original) The system as recited in claim 46, further comprising a relief valve system in communication with the dedicated volume to vent gas from the bubble sump.
52. (Original) A method of protecting components of an electric submersible pumping system from accumulated gas, comprising:
- locating a bubble sump in at least one of a motor section and a protector section of an electric submersible pumping system; and
- creating the bubble sump with a dedicated volume sufficient to collect gas that would otherwise interfere with lubrication of internal components.
53. (Original) The method as recited in claim 52, wherein locating comprises locating the bubble sump above a component susceptible to damage by exposure to accumulated gas.
54. (Original) The method as recited in claim 52, wherein creating comprises providing a framework with the dedicated volume disposed within.

55. (Original) The method as recited in claim 54, wherein providing comprises forming the framework with a plurality of vent holes through which gas flows to the dedicated volume.
56. (Original) The method as recited in claim 52, wherein creating comprises creating the bubble sump around a rotatable shaft.